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ABSTRACT

The Parenting Stress Index (PSI) is a clinical and research self-report instrument designed to identify mother-child systems which are under stress and to indicate the sources of stress. It is based on the research literature in child development, parent functioning, and stress. The normative sample for the PSI consisted of 470 mothers with at least one child under three years of age. Norms and factor analyses for this sample are presented. Reliability coefficients and some preliminary findings on the validity of the PSI are reported. Possible problems with the PSI are discussed and clinical benefits are suggested. (Author/BW)

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The Parenting Stress Index - Clinical Trials

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The Parenting Stress Index (PSI) is a clinical and research self-report instrument designed to identify mother-child systems which are under stress and to indicate the sources of the stress. The staff of the Parent Research Project of the University of Virginia has been working on the instrument for 3 years, but recognizes that the instrument is still in its development phase. However, the PSI shows strong promise as both a screening and diagnostic instrument. The instrument was built on the research literature in child development, parent functioning, and stress. Approximately 95% of the 126 items are directly related to the findings and conclusions of other researchers. The Parenting Stress Index capitalizes on the research efforts and findings of such individuals as Chess, Thomas and Birch (1968), Elsa Broussard (1970), Rahe (1974), Mary Ainsworth (1978), Dick Bell (1975), J. Cameron (1978) and Holmes & Masuda (1974). In developing the instrument, the Parent Research group was guided by a number of assumptions. The first was that the instrument would be built on the existing knowledge and that the present effort would be to collate and interface the existing knowledge base with the clinical issues of identification and diagnostic analysis of individual mother-child systems under stress. The second major assumption was that stressors or sources of stress are additive, the work of Selye (1952, 1974) and Rahe (1974) on life stress events supports this assumption. The third assumption was that stressors were multi-dimensional both as to source

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and as to kind. This assumption lead us to identify three major source domains of stressors: (1) Child Characteristics (2) Mother Characteristics, and (3) Situational/Demographic Characteristics. With regard to the kinds of stressors identified, they range from objective life events such as the death of a family member, to mothers judgment of the childs activity level, to the mothers subjective feelings of being trapped by her parenting responsibilities.

The normative sample for the PSI consists of 470 mothers with at least one child under 3 years of age. The sample was collected from a private group pediatric practice in a small city in Virginia. The mothers comprising the sample were young (mean age 28), 95% white, 40% working, the total median family income was $15,000-$20,000 per year. The instrument was also field tested with low SES parents and was readily understood by all of the parents who completed the 6th grade. The PSI takes between 20-30 minutes to complete.

The Psychometric Properties of the PSI

Table #1 describes the norms for the total score, the Domain Scores, and the subscale scores. The PSI was factor analyzed and a 2 factor solution was developed which accounted for 26% of the total variance, this is in line with our assumption that stress is likely to be multidimensional and composed of relatively discrete sources. The first factor in order of magnitude contained mainly items from the Mother Characteristic domain (19.6% of variance). The second largely contained items from the Child Characteristics domain (6.6% of variance). The

remaining variance was accounted for by a large number of factors which individually accounted for from 4.4 to 1% of the variance.

The PSI's reliability was assessed by using a test-retest procedure (3 week interval) and an internal consistency index. Using the Spearman procedures, a test-retest coefficient of .82 was obtained for the Total Score, .84 for the Child Characteristics Domain, .70 for the Mother Characteristics Domain, and .78 for the Situational/Demographic Domain. The Alpha-reliability coefficients were as follows: Total Score r=.93, Child Characteristics Domain r=.87, Mother Characteristics Domain r=.91, and Situational/ Demographic Domain r=.68.

The distributions for the Total Score and 3 domain scores were essentially normal with minimal skewedness and only a slight platokurtic quality. The range of scores was 4 to 6 times the Standard Deviations which bodes well for the instruments potential to discriminate between individuals.

The PSI's validity is in the process of being established both through clinical use and by formal research studies. The establishment of validity is a slow procedure since it involves so many kinds of validity and must be established for different populations and uses. Some of the research findings available to date will be presented and this will be followed by clinical insights.

In a study of concurrent validity a significant low order (.15) correlation was found between pediatricians evaluation of stress in the normative sample and the total stress score. We found pedia-

tricians were either unable or unwilling to make discriminations regarding the levels of stress displayed by mothers during routine medical appointments. The extreme degree of skewedness and the lack of range of their scores probably accounted for the low positive correlations (Burke, 1978).

Zimmerman (1979) found that the PSI scores from families raising a handicapped cerebral palsy child, which one would expect to be under more stress, produced mean scores which were significantly higher than the normative sample. The mean Total Score for the CP families was 319 versus 270 for the normative sample, and 268 for a matched control group of non-handicapped mother-child systems. Table #2 contains the means and S.D.s for the CP sample and the non-handicapped control group for the various PSI scores. Table #3 contains the results of the between group t-tests. These results are consistent with logical expectations and clinical judgments in that they reveal the CP mother-child systems to be under greater overall stress. The Domain Score pattern and subscale pattern appears uniquely related to the C.P. group, with no significant difference in Situational/Demographic stressors, no significant difference in Mother Domain Score and a major significant difference in stress emanating from the Child Domain. The subtest pattern of significant differences further supports the PSI's current validity for the C.P. sample. While the Mother Domain score of the C.P. group was not significantly different from that of the matched control group, three of the eight subtests were significantly different, Social Isolation, Restrictions caused by maternal role, and Mothers Health. These

subtests differences would logically appear to result as a function of coping with a C.P. child who is non-ambulatory and very dependent.

One interesting finding which may have some implications for intervention systems was revealed when Zimmerman compared 1st born mothers with CP children versus later born mothers of CP children. He found no difference in Total Score, Child Domain or Situational/ Demographic Score. However, the Mother Domain Score revealed a significant difference. This difference was also seen in the data he collected concerning the mother's asking for and receiving different kinds of support from friends, family and professional sources. First born mothers of handicapped children apparently received less support than later born mothers. First born mothers may experience more personal stress and receive less support than later born mothers, and this appears consistent with the work of Schachter (1959).

In another study by Burke (1979) the level of stress was found to be correlated with medical utilization rates during the 15 month period following the mother completing the PSI. The children in the High Stress mother-child systems came to the pediatrician with more injuries and suffered more vaguely explained accidents than children from low stress systems.

Plough, in a study dealing with the effectiveness of brief parent consultations for mothers of young children, ages 0-10 years, who reported experiencing difficulty in child care found an initial mean Total Score of 336 on the PSI and a post consultation mean Total Score of 286. These differences would suggest that the PSI is sensitive to reductions in stress level and may be

a useful outcome measure to evaluate different forms of professional intervention with mothers. Further analysis of Plough's data revealed that the changes in stress level was related to a reduction in the Mother Domain score with no significant differences occurring in the Child Domain and the Situational/Demographic Domain. An interesting point related to this finding was that mothers evaluations of the effectiveness and value of the consultation experience were significantly correlated .80 with changes in the Mother Domain Score, while changes in the Child Domain or Situational/Demographic Domain showed no such relationship.

The clinical experiences gained with the instrument has suggested some problems with the instrument which are currently under investigation. First, it appears that from a normative frame of reference, there may be some age of child effects which need to be considered. The age effect which is suggested is that the current total norms may over estimate stress in parents of young children ages 0-3 and underestimate stress in parent-child systems involving older children ages 7-10. Second, there is some suggestion that a correction factor for defensiveness and denial may be needed such as is found on the MMPI. We found in practice that some mothers who were known to be under high stress both prior to taking the PSI, or who revealed extreme degrees of stress during the first consultation session, earned low Total Scores on the PSI. These false negative protocols, however, appear to have relatively high spikes on three subtests: Acceptability of Child to Mother, Mothers Health, and Realistic Attitudes Towards Children

and these scale may be useful in identifying dissimulation. At the present time, Julia Green and Mary Ainsworth are in the middle of a study relating stress to attachment as measured by the "Strange Situation" and there is some suggestion that scores on the PSI may be related to some of the interactive scores of the Strange Situation but not necessarily to overall attachment or any particular type of attachment pattern.

From our clinical work we have also determined that some individuals with high Total Stress scores are still functioning adequately with regard to child care tasks and the mother-child system which is under stress is not presently dysfunctional but is in crisis. Protocols with Total Scores of 325 and above, we have found are clearly in need of at least brief parent consultation and in many cases more direct and intensive intervention is needed.

One very positive feature of the PSI is that the consultant working with a mother can go over the profile and be cued into the sources of stress. For example, if a high score is earned by virtue of the items in the Child Domain, then the consultant is alerted to the need to focus on the mother's management and perception of the child as the starting point. A review of the child subscales even further sharpens the focus. It has been our experience that mothers in general enjoy and react favorably to a discussion of the PSI results and that the review of the instrument results facilitates the helper relationship. Clinically it has become clear that the PSI adequately measures the stressors in

the mother-child system. In an engineering sense it measures load factors, what it doesn't measure in any comprehensive way is coping ability or ego strength. While one would expect stress load to be related to system failures and dysfunction, this is not always the case. Our clinical experience indicates that there exists "Super Moms" and "Fragile Moms."

At the present time the staff of the Parent Research Project is hopeful that the PSI will prove to be a valuable screening and diagnostic instrument and invites others to use the instrument.

Attachment #1

Parenting Stress Index
Raw Score - Norms/Profile

1978 - Abidin-Burke

%ile Rank	Total Score	Child Domain	Child Adapt.	Accept. Child	Child Demand	Child Mood	Child Distr.	Mo. Reinf.	Mo. Domain	Mo. Depress	Mo. Attach	Restric. Role	Sense Comp.	Soc. Isol.	Real. Attit.	Relat. Spouse	Mo. Health	Sit. Dem. Dom.	Sit. Stress	Life Stress
100	416	163	43	23	45	32	39	25	152	66	33	40	57	33	22	24	19	95	31	36
95	344	132	35	17	33	16	33	16	145	50	26	33	49	22	16	20	16	79	26	20
90	324	127	33	16	31	14	31	14	134	46	24	30	45	21	15	18	14	73	24	17
85	312	122	32	15	29		29	13	129	43	(23)	29	43	(19)	14	17	12	70	23	14
80	302	119	31		27		28		122	41	22	28	41	18				67	22	13
75	297	116	30	14			27	12	119	40		26	40		13	15	11	64	22	12
70	289	113	29		26	12	26		117	39	21	25	39	17		14		63	21	10
65	284	111	28	13	25			11	114	38	20	24	38	16		13	10	61	20	
60	279	109				11	25		111	37			37		12	12		60	19	8
55	274	106		12			(24)	10	108	36	19	(23)	36					58	18	
50	270	105	27		23				106	35		22	35	14	11	11		57	18	7
45	265	103	26			10	23		104	34		21	34			10	9		17	6
40	261	101		11	22			9	102	33	18	20		13	10			54	17	
35	256	98	25		21	9	22		99	32								53	17	4
30	250	95	24	10				8	97	31	17	19		12		9	8	51	16	
25	242	91		9	(20)	8			95	30		18			9			49	15	
20	235	88	23		19		20		92	28		17	30	11		8		48	14	3
15	226	84	22	8	18	7	19	7	87	26	15	16	28	10	8	7	7	46	14	2
10	218	80	20	7	16	6	18		83	24	14	15	27	9	7	6		44	13	0
5	201	72	18		15		16		76	21	13	14	24	8	6	5	5	39	11	
0	157	47	11	2	7	1	7	5	53	12	8	7	16	7	1	2	4	18	8	
Scale #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Var. #	172	169	174	175	176	177	178	179	170	180	181	182	183	184	185	186	187	171	188	173

( ) = number shown was 2 %ile points away from interval it represents. All others are within 2 %ile points of interval

- In the case where two numbers were equidistant from %ile interval, the lower number was selected.

TABLE 2

MEANS FOR STRESS SCORES

Variable	Handicapped		Non-handicapped	
	Mean	Standard Deviation	Mean	Standard Deviation
Total Score				
Overall stress	319.35	33.33	268.33	44.74
Stress: Mother Domain	113.60	19.69	108.53	20.96
Mother sub-scores:				
Depression	35.40	5.95	32.27	7.81
Attachment	18.05	4.06	19.53	5.40
Restrictions	24.25	5.48	19.60	3.98
Competence	38.30	6.76	38.53	7.75
Social Isolation	15.75	3.58	12.53	3.00
Realistic Attitudes	12.50	2.35	14.20	2.86
Husband	11.00	4.74	9.53	2.50
Health	10.15	2.94	7.80	2.21
Stress: Child Domain	132.95	17.49	99.93	21.09
Child sub-scores:				
Adaptability	33.50	7.53	23.87	5.58
Acceptability	18.00	4.10	12.07	3.33
Demandingness	34.85	5.76	24.27	5.38
Mood	15.35	3.69	11.47	3.29
Distractibility	29.55	4.25	23.20	4.86
Interaction	12.85	4.03	13.00	2.56
Life stress	7.70	5.66	6.07	5.35

TABLE 3

BETWEEN-GROUP T-TESTS ON STRESS SCORES
Handicapped Versus Non-Handicapped

Variable	t	df	2-tail probability
Total Score			
Overall stress	3.87	33	.000*
Stress: Mother Domain	.84	33	.406
Mother sub-scores:			
Depression	1.35	33	.186
Attachment	- .93	33	.359
Restrictions	2.78	33	.009*
Competence	- .09	33	.925
Social Isolation	2.81	33	.008*
Realistic Attitudes	-1.93	33	.062
Husband	1.09	33	.284
Health	2.59	33	.014*
Stress: Child Domain	5.06	33	.000*
Child sub-scores:			
Adaptability	4.17	33	.000*
Acceptability	4.58	33	.000*
Demandingness	5.53	33	.000*
Mood	3.22	33	.003*
Distractibility	4.12	33	.000*
Interaction	- .13	33	.900
Life stress	.86	33	.393

* significant at p<.01